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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,661	08/19/2003	H.-Rudi Krockner	040159-000000US	6425
20350	7590	12/21/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			KASTLER, SCOTT R	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/644,661	KROEKER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Scott Kastler	1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/1/2005 has been entered.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of the instant disclosure in view of Kudinov et al. The admitted prior art of the instant disclosure teaches, in paragraphs [0002]-[0004], that it was known in the art at the time the invention was made, to cool the trunnion rings of an oxygen based metallurgical converter due to heat from the converter adversely affecting the trunnion ring, thereby meeting all requirements of the above claims except the use of one or more cooling panels placed on the trunnion ring between the ring and the converter body for cooling the trunnion ring. Kudinov et al teaches a cooling system including a cooling plate (figure 1 for example) for use in metallurgical environments where cooling is desirable (which would include trunnion rings),

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including one or more cooling panels, each panel including a bracket (6) and threaded fasteners (mounting bolts, see col. 2 lines 41-43), with an inlet connected to a cooling supply and an outlet (4), where each cooling panel includes a network of conduits and is detachable for replacement and/or repair, meeting all aspects of the instantly recited cooling panels. Because the admitted prior art of the instant disclosure teaches that it was known that trunnion rings are adversely affected by heat from a converter, and the closest portion of any trunnion ring (the interior sides) would be the most affected, one of ordinary skill in the art at the time the invention was made would have found it an obvious modification to position a cooling plate of the type described by Kudinov et al as suitable for cooling adversely heated areas of metallurgical devices, on a trunnion ring of the admitted prior art of the instant disclosure, where the cooling would be most required (the interior side).

### ***Response to Arguments***

Applicant's arguments filed on 12/1/2005 have been fully considered but they are not persuasive. Applicant's argument that the admitted prior art of the instant disclosure does not disclose the desirability of cooling the interior sides of a trunnion ring is not persuasive. As stated in paragraph [0002] of the specification for example, it was known in the art at the time the invention was made that thermal loads from a converter attached to a trunnion ring would adversely affect the trunnion ring. As expressed in the above rejection, because the admitted prior art of the instant disclosure teaches that it was known that trunnion rings are adversely affected by heat from a converter, and the closest portion of any trunnion ring (the interior sides) would be the most affected, one of ordinary skill in the art at the time the invention was made

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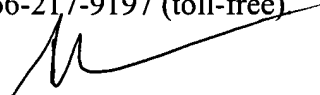
would have found it an obvious modification to position a cooling plate of the type described by Kudinov et al as suitable for cooling adversely heated areas of metallurgical devices, on a trunnion ring where the cooling would be most required (the interior side).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Scott Kastler  
Primary Examiner  
Art Unit 1742

sk